



Title of the Invention: METHOD AND SYSTEM
FOR AUTOMATED SELECTION OF OPTIMAL....
Inventor's Name: T. Rappaport, et al.
Docket No./Application No. 09/667,689
REPLACEMENT SHEET

1/15

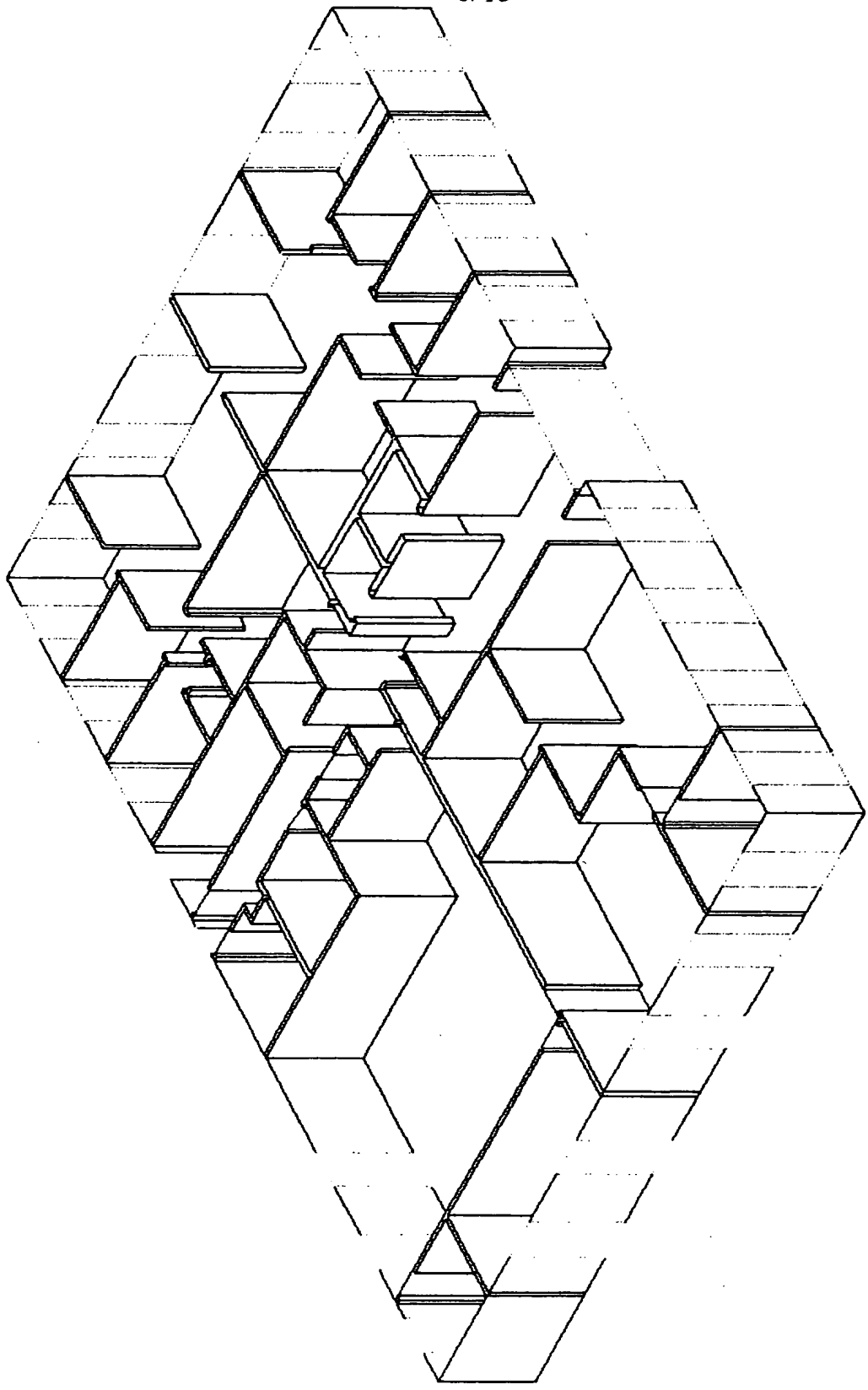


Figure 1



Title of the Invention: METHOD AND SYSTEM
FOR AUTOMATED SELECTION OF OPTIMAL....
Inventor's Name: T. Rappaport, et al.
Docket No./Application No. 09/667,689
REPLACEMENT SHEET

2/15

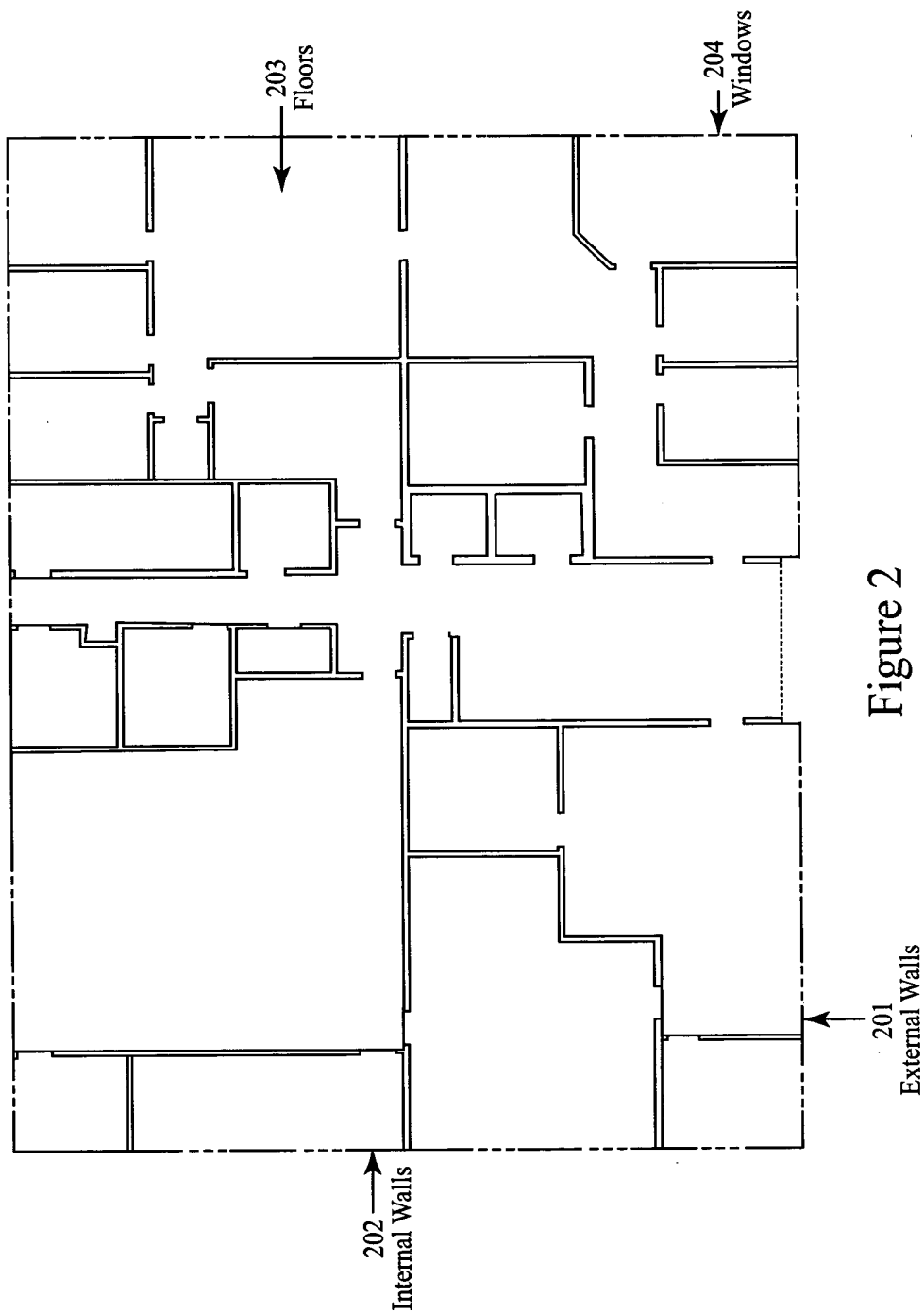
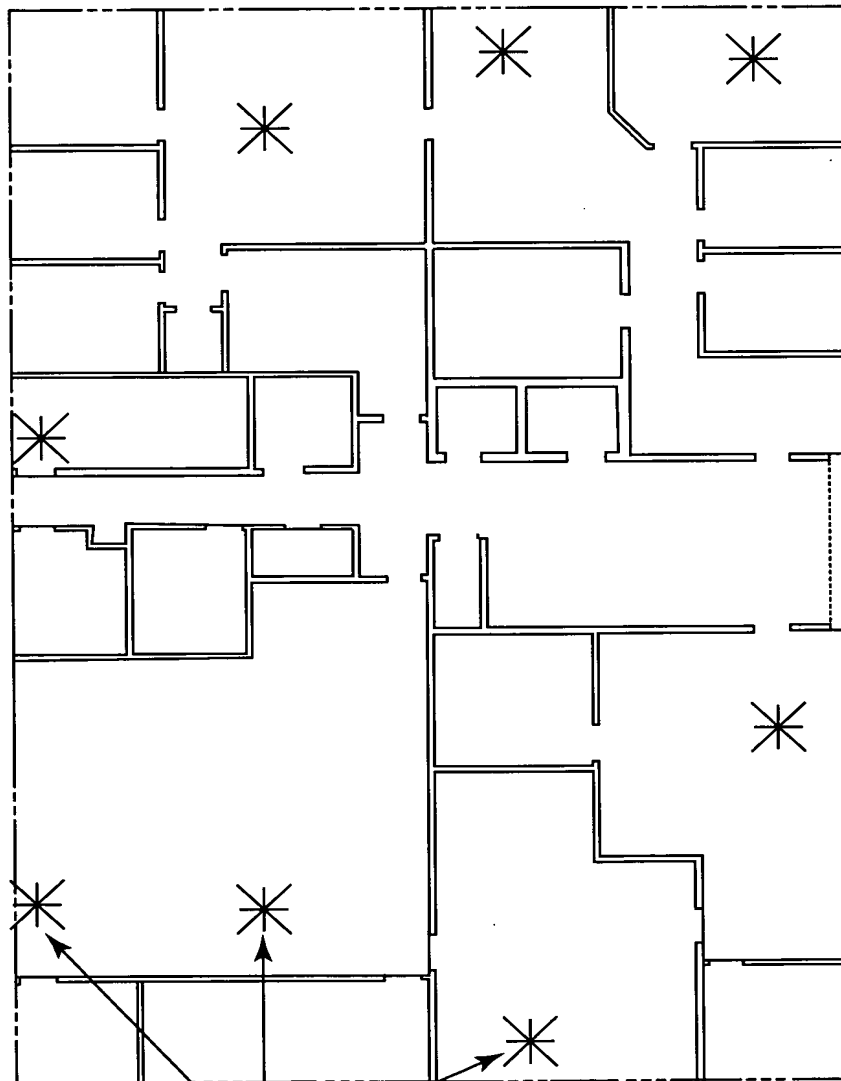


Figure 2



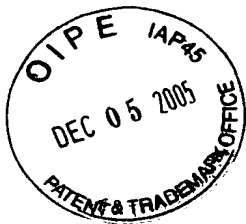
Title of the Invention: METHOD AND SYSTEM
FOR AUTOMATED SELECTION OF OPTIMAL....
Inventor's Name: T. Rappaport, et al.
Docket No./Application No. 09/667,689
REPLACEMENT SHEET

3/15



301
Boundary
Locations
& desired
performance
metrics

Figure 3



Title of the Invention: METHOD AND SYSTEM
FOR AUTOMATED SELECTION OF OPTIMAL....
Inventor's Name: T. Rappaport, et al.
Docket No./Application No. 09/667,689
REPLACEMENT SHEET

4/15

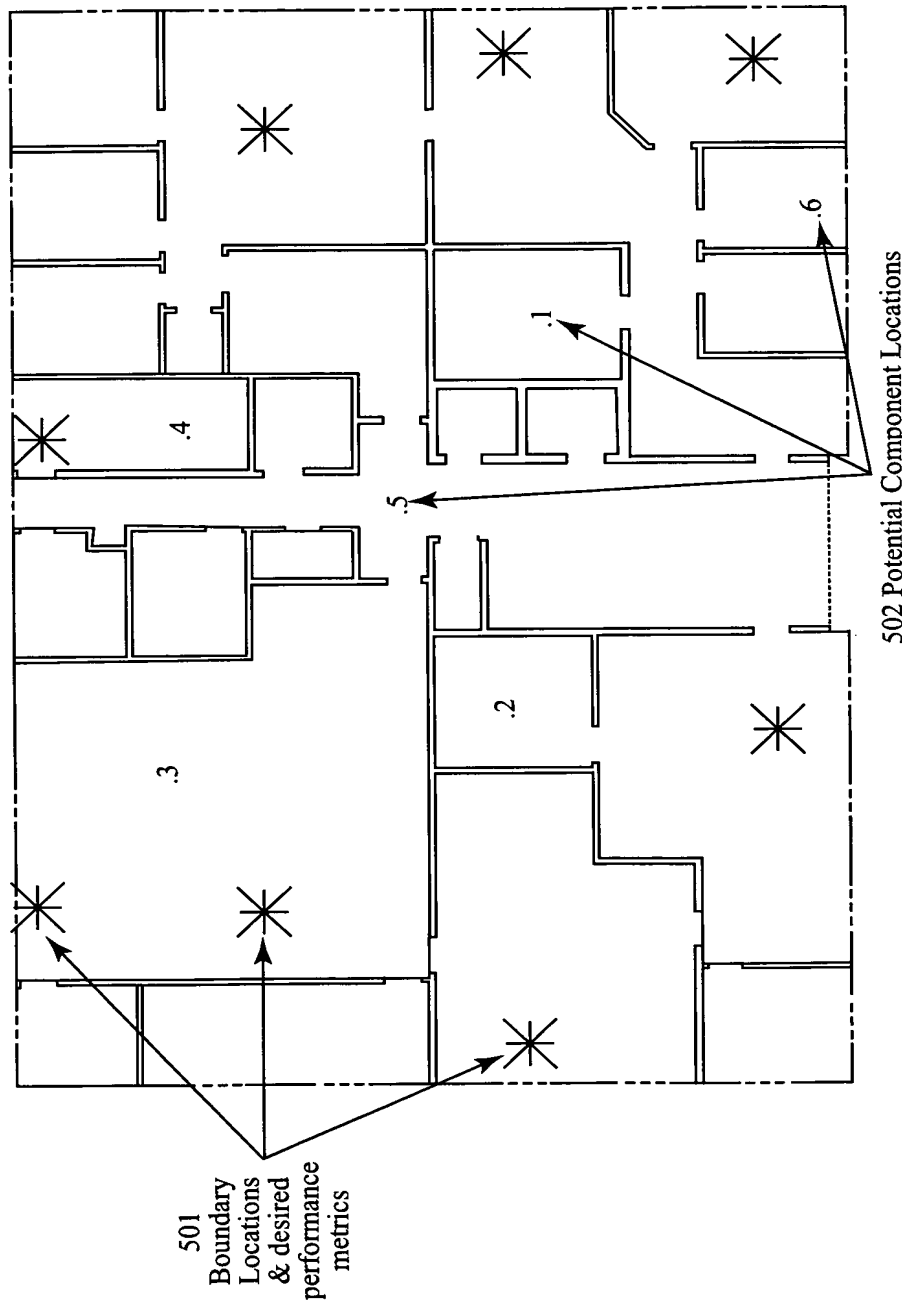
402

Select Component from Database to Add									
Type	Manufacturer	Decibel Product	Part #	Dispersion	Loss (dB)	Connections	Physical Cost	Non-Physical Cost	
ANTENNA_POINT	Decibel Products	DB884 H45	60 deg 11 dB Gain	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB884 H60	45 deg 15 dB Gain	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB886 H60	60 deg 14.3 dB Gain	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB884H60	60 deg 15 dB Gain	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB898H60	60 deg 13 dBd gain panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB958DD90-M	60 deg 16 dB gain panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB974H105 1320	90 deg 13.5 dBd Gain PCS 45/45	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB974H90	105 deg 10.50 dB Gain 1320 MHz	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB978H120	11 dBd Gain 90 deg	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB978H90M	120 deg 13 dBd Gain PCS	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB980H105-M	90 deg 14 dBd Gain PCS	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB980H120-M	105 deg 14.5 dBd Gain PCS	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB980H65-M	120 deg 14 dBd Gain PCS	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	Decibel Products	DB980H90M	65 deg 16.5 dBd Gain PCS	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	105100NAS	90 deg 15 dBd Gain PCS	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	601500NA	Wireless 105 deg 9.5 dBd Gain Panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	900500NA	60 deg 15.0 dBd gain panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	900500NAS	90 deg 9.3 dBd gain Panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	900510NA	90 deg 9.5 dBd gain panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	900510NAS	90 deg 9.5 dBd gain panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	901200NA	90 deg 9.5 dBd gain panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	901200NAS	90 deg 12 dBd gain Panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	901205NAS	90 deg 12.0 dBd gain Panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	901210NAS	90 deg 12.5 dBd gain Panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	901300NA	90 deg 12.0 dBd gain Panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	DV105-08-00_A2	90 deg 13.3 dBd gain Panel	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	DV105-08-00_M2	OptiRange 8dBd Vertical Polar Array	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	DV105-09-00_A2	OptiRange 8dBd Vertical Polar Array	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	DV105-09-00_M2	OptiRange 9dBd Vertical Polar Array	0.00	1	0.00	0.00	0.00	
ANTENNA_POINT	EMS Wireless	DV65-10-00_A2	OptiRange 10dBd Vertical Polar Array	0.00	1	0.00	0.00	0.00	

Back

Figure 4

401





Title of the Invention: METHOD AND SYSTEM
FOR AUTOMATED SELECTION OF OPTIMAL....
Inventor's Name: T. Rappaport, et al.
Docket No./Application No. 09/667,689
REPLACEMENT SHEET

6/15

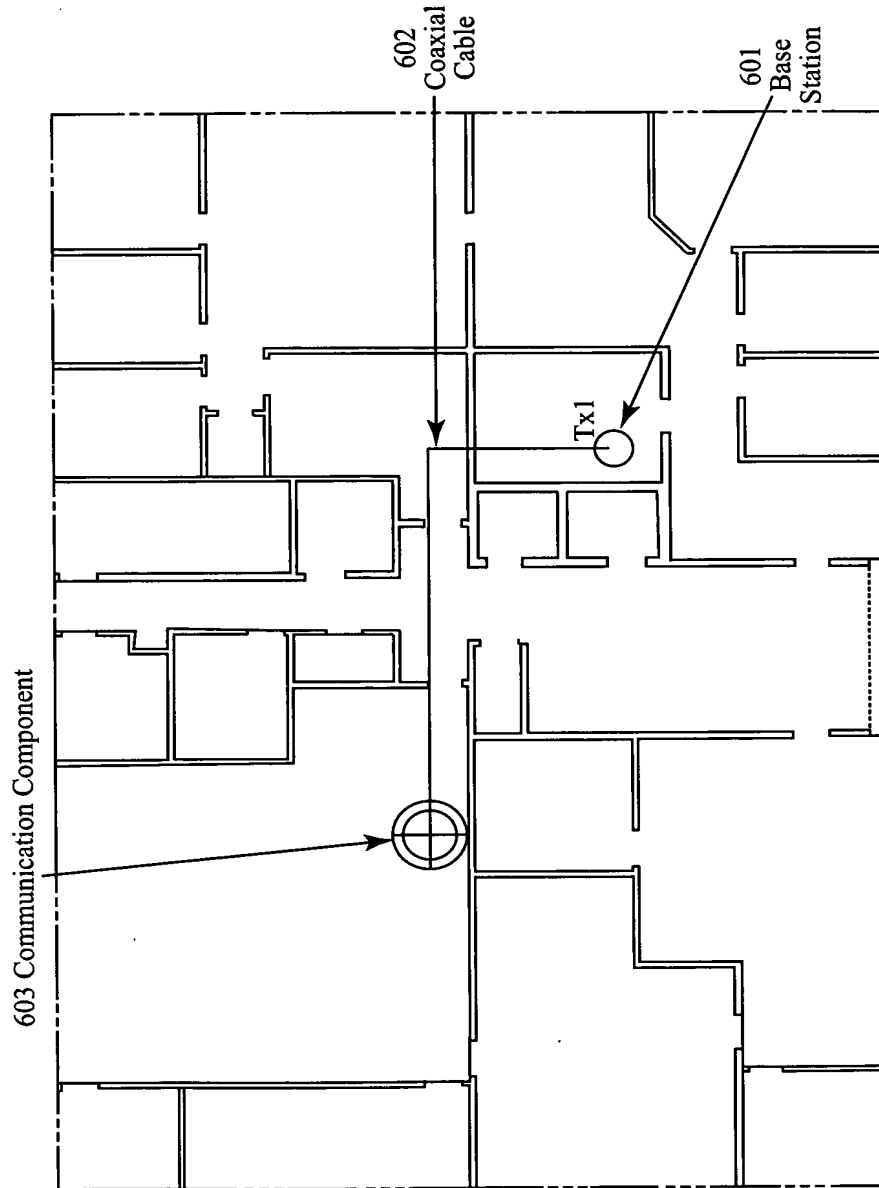


Figure 6

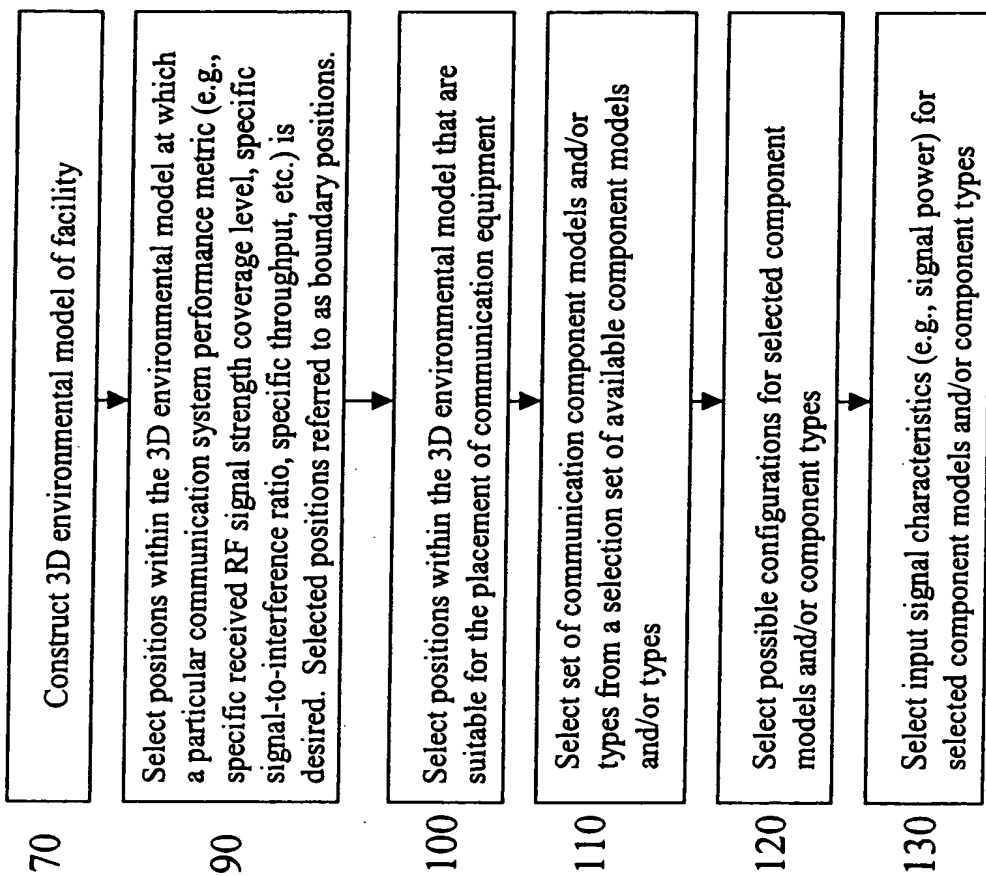


Figure 7

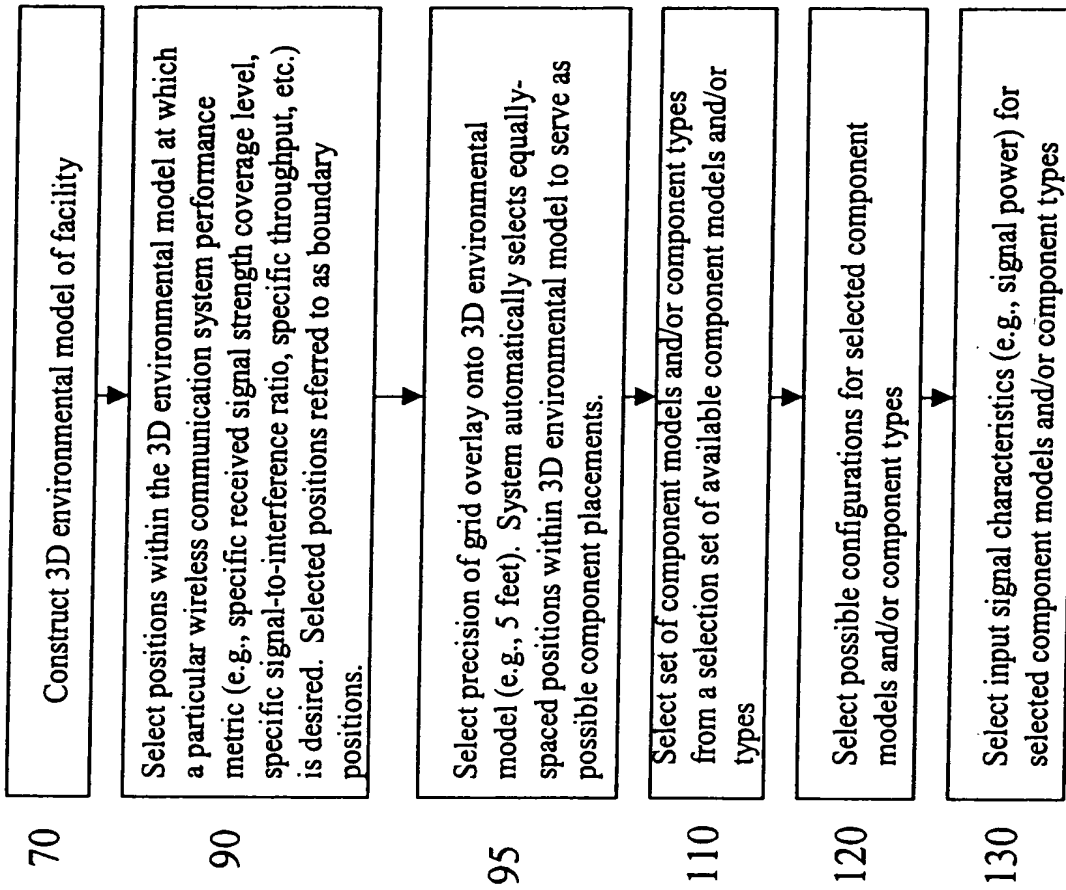


Figure 8

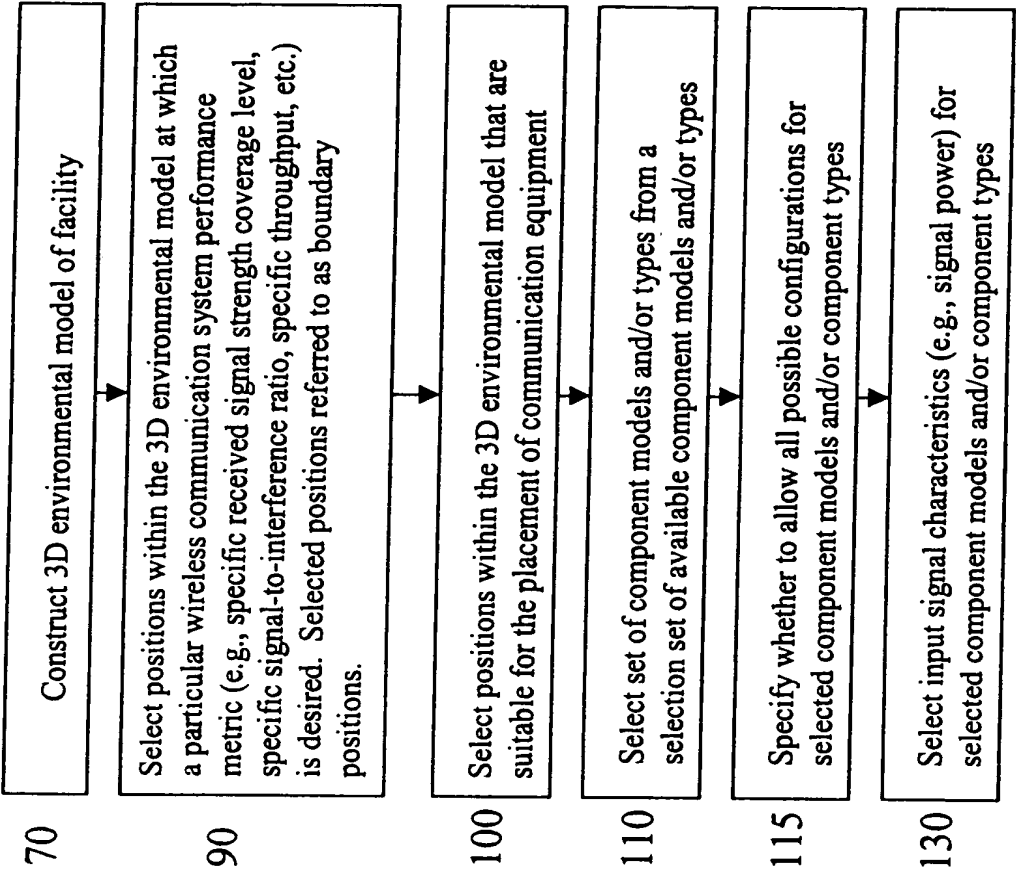


Figure 9



10/15

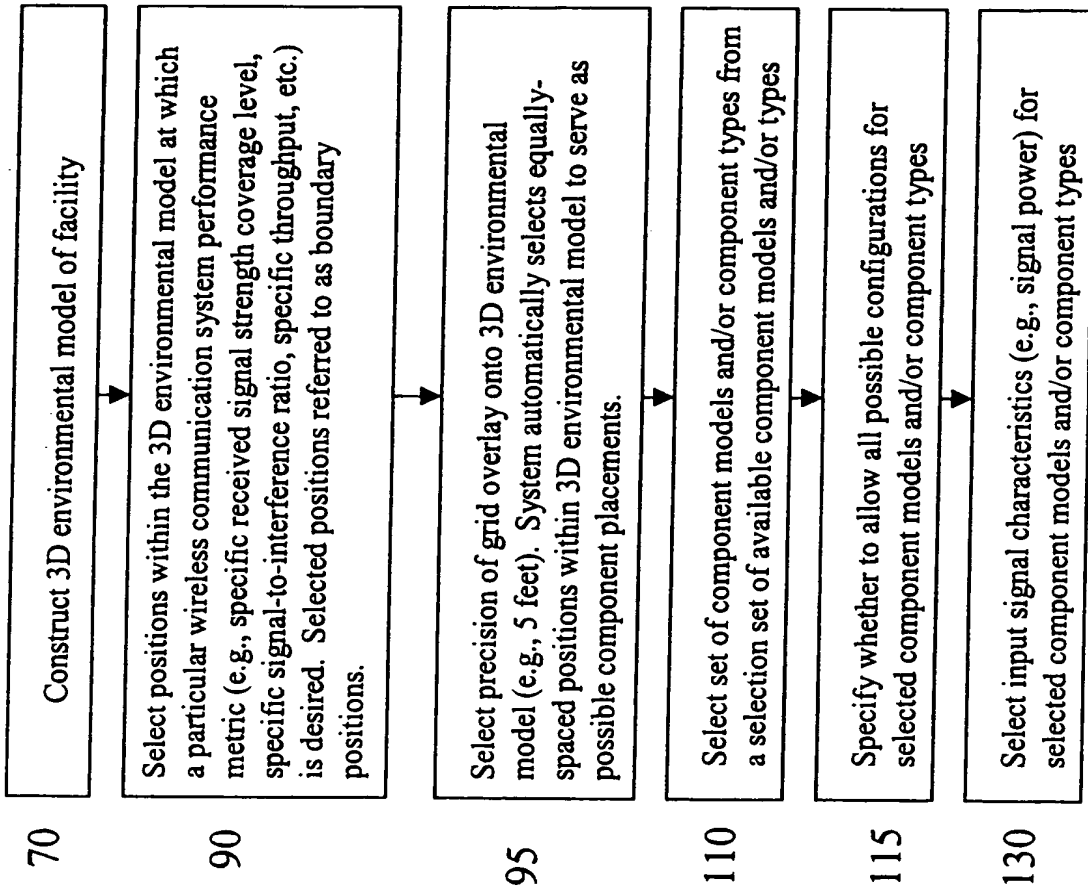


Figure 10

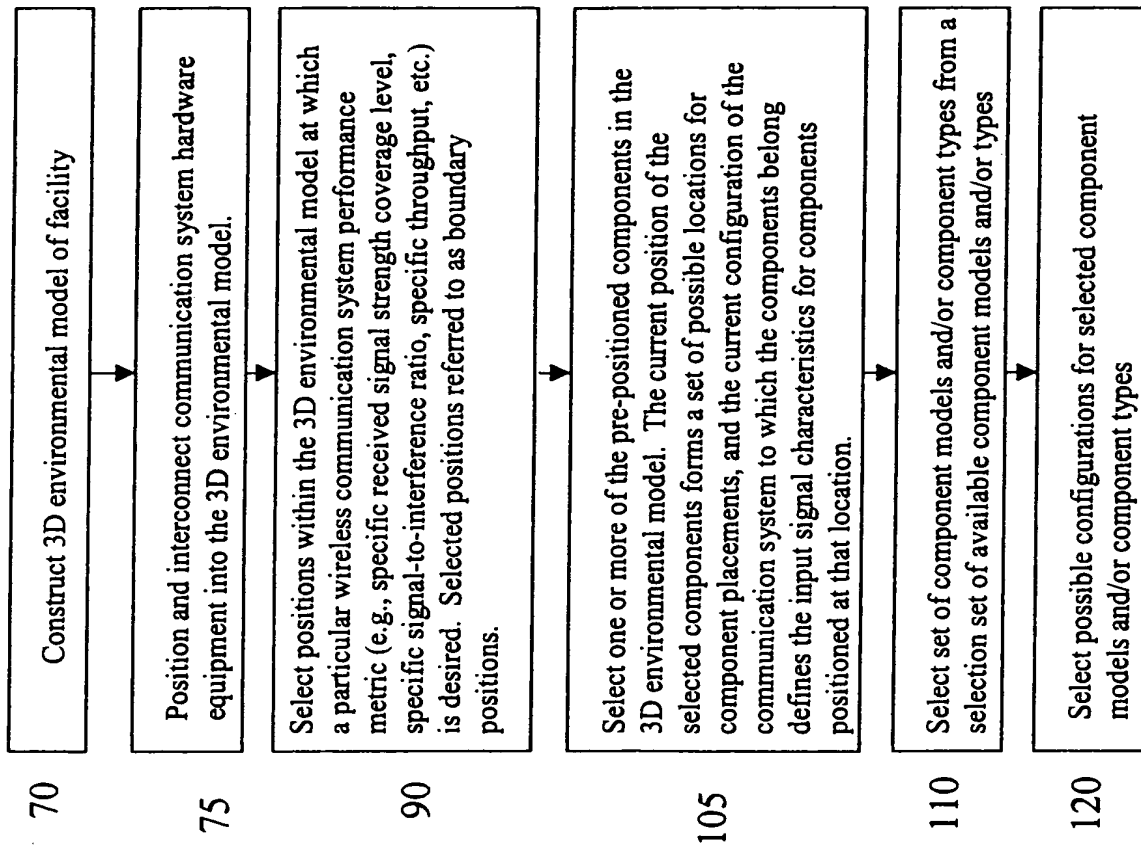


Figure 11



12/15

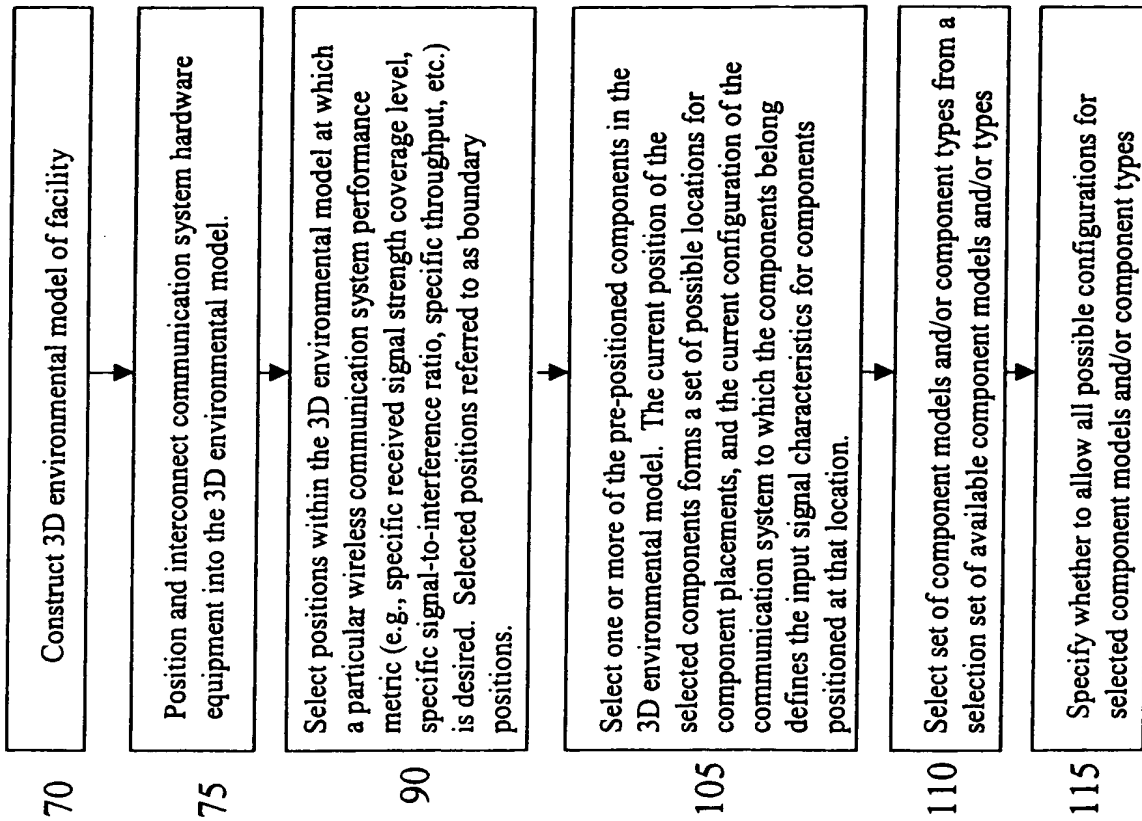


Figure 12



From Figure 7, Figure 8, Figure 9, Figure 10, Figure 11, or Figure 12

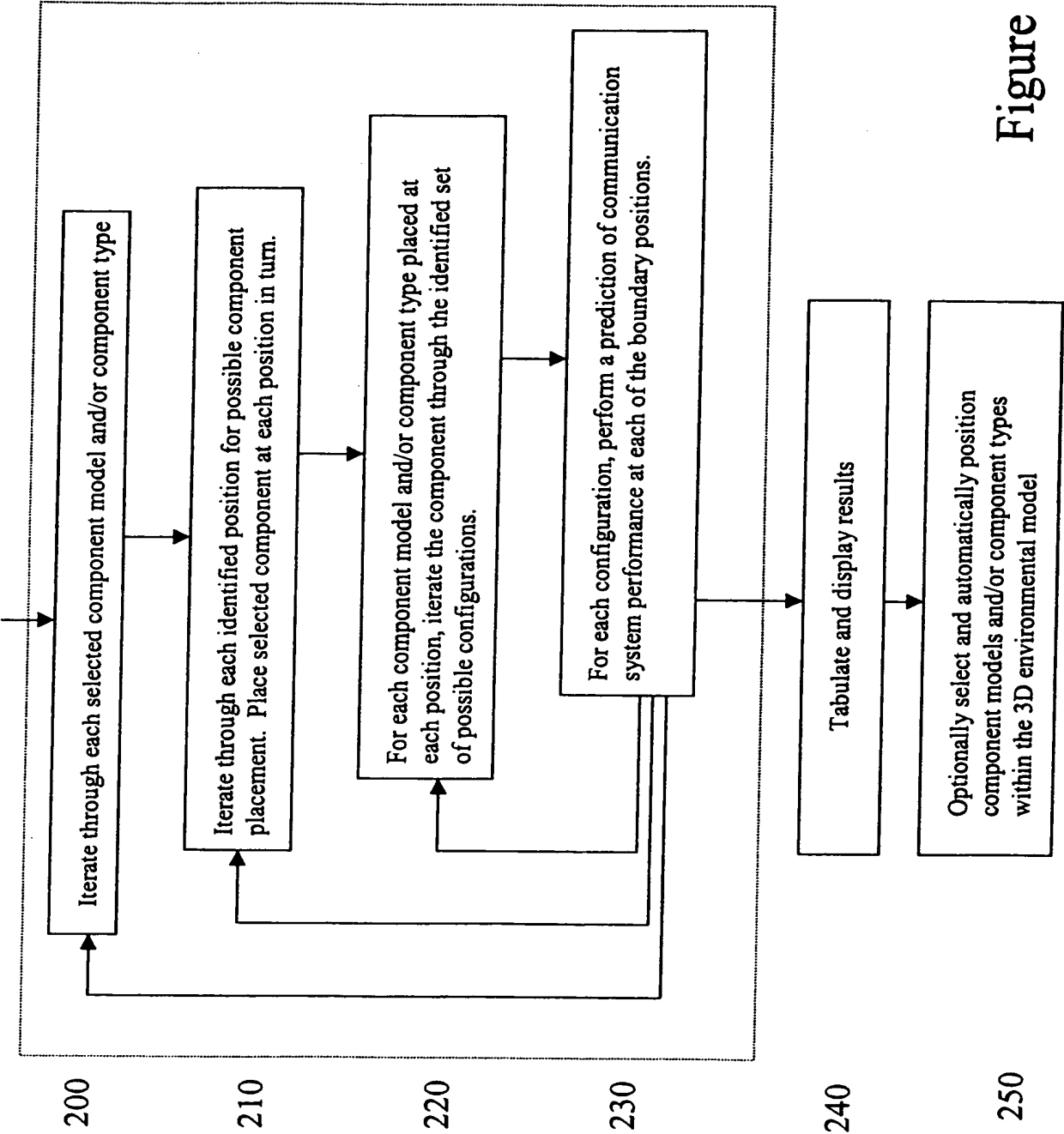


Figure 13



Antenna Optimizer Results									
Manufacturer	Part #	Description	Mean	Std. Dev.	X-Axis Rotation	Y-Axis Rotation	Z-Axis Rotation		
Allen Telecom	ASFP2933 1920	dB OMNI PCN 1850-1990 360 deg. 3.00 dB Gain	0.00 dB	0.82 dB	210.00 deg	0.00 deg	250.00 deg		
Algon	7144.23	90 deg. 10 dBd Gain	0.00 dB	0.75 dB	310.00 deg	50.00 deg	150.00 deg		
Antel	RWA-80010	78 deg. 10 dBd Gain	0.00 dB	0.75 dB	260.00 deg	0.00 deg	130.00 deg		
Antenna Specialist	ASP963	60 deg. 17 dB gain	0.00 dB	0.68 dB	80.00 deg	0.00 deg	130.00 deg		
Calwave	PD1109	7.5 dB Gain OMNI	0.00 dB	0.77 dB	90.00 deg	0.00 deg	230.00 deg		
COMSAT RSI Mark...	PCS A 065-16-5	65 deg. 16.8 dBd Gain PCS w/5 deg. D/T	0.00 dB	0.68 dB	120.00 deg	50.00 deg	320.00 deg		
Dapa	56000X	Dual (Slant 45) Polarized 50-ohm 300W	0.00 dB	0.70 dB	130.00 deg	0.00 deg	310.00 deg		
Decibel Products	DB878 H83	83 deg. 15.2 dB Gain	0.00 dB	0.70 dB	170.00 deg	0.00 deg	320.00 deg		
EMS Wireless	FS90-11-00_M2	OptiFill 11 dBd Vert/Slant 45 Polar Array	0.00 dB	0.74 dB	260.00 deg	0.00 deg	20.00 deg		
GENERIC	VERTICAL_DIPOLE_QUARTER	5 dBd max gain	0.00 dB	0.80 dB	120.00 deg	0.00 deg	330.00 deg		
Hazelline	806-050-14-0 870	50 deg. 15.13 dBd Gain 870 MHz	0.00 dB	0.70 dB	140.00 deg	0.00 deg	290.00 deg		
Kathrein	740247	6 dB Gain OMNI	0.00 dB	0.79 dB	30.00 deg	0.00 deg	50.00 deg		
Mark	CV108005	Mark 10 dB Gain OMNI	0.00 dB	0.75 dB	270.00 deg	0.00 deg	330.00 deg		
Scale	BP16-875	Scala 48 deg. 16 dB Gain (same as 740215)	0.00 dB	0.69 dB	140.00 deg	0.00 deg	150.00 deg		
Sinclair	SRL411 C4 R105	105 deg. 9.5 dB Gain	0.00 dB	0.75 dB	310.00 deg	50.00 deg	320.00 deg		
Swedcom Corporation	ALP9212N	92 deg. 11.3 dB Gain	0.00 dB	0.74 dB	80.00 deg	0.00 deg	0.00 deg		
TIL-TEK	TA-803 60	TIL-TEK 60 deg. 12.5 dB Gain	0.00 dB	0.00 dB	0.00 deg	0.00 deg	0.00 deg		

<< Back

Replace current antenna with selection

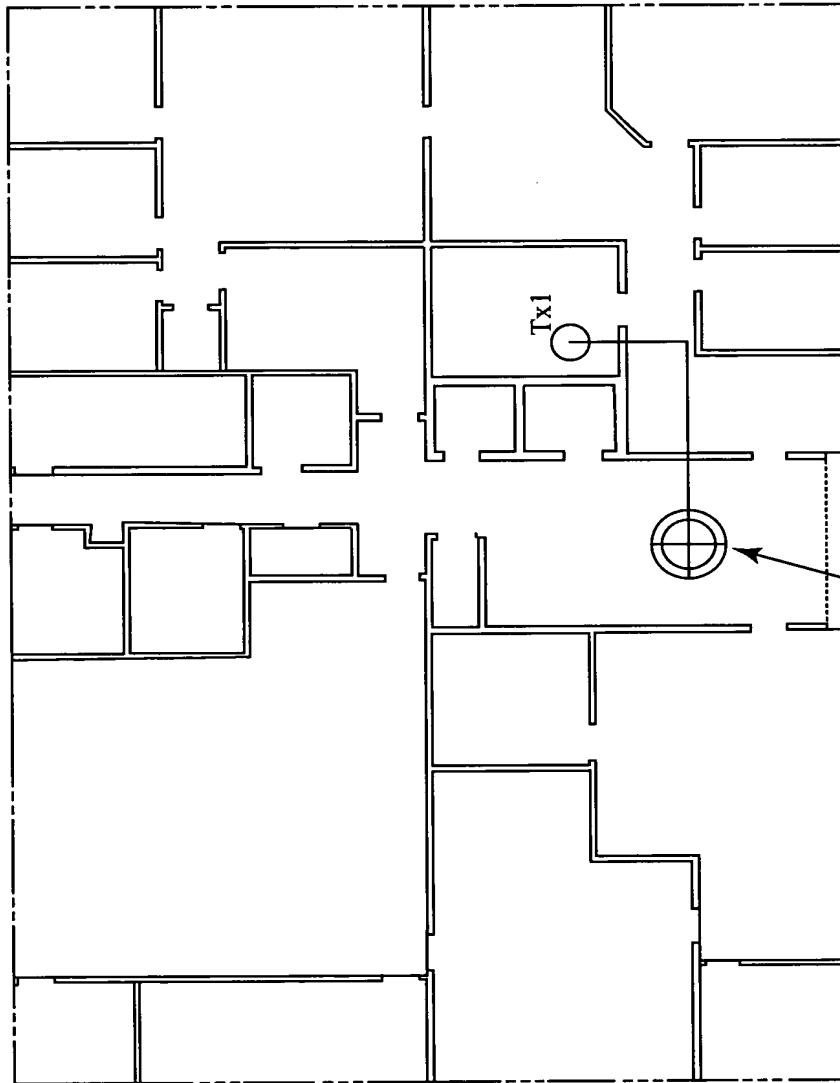
Done

Figure 14



Title of the Invention: METHOD AND SYSTEM
FOR AUTOMATED SELECTION OF OPTIMAL....
Inventor's Name: T. Rappaport, et al.
Docket No./Application No. 09/667,689
REPLACEMENT SHEET

15/15



603 Communication Component

Figure 15